



09/15/00

ASSISTANT COMMISSIONER FOR PATENTS  
Washington, D. C. 20231

PATENT APPLICATION  
Case Docket No. **200-0549**  
Date: September 13, 2000

Sir:

Transmitted herewith for filing is the patent application of Inventor(s):

<b>Colin Jarvis</b>	<b>Manfred Wajroch</b>
<b>Daphne Wakefield</b>	<b>Peter Przybocki</b>
<b>Janis Haag</b>	<b>Serguei Lougovier</b>
<b>Nam Thai-Tang</b>	<b>Michael Mei</b>

For: **METHOD FOR CONDUCTING A FINANCIAL ANALYSIS**

Enclosed are:

- ☒ 6 sheet(s) of drawings  
☒ Assignment and Cover Sheet  
☐ Information Disclosure Statement, PTO Form 1449, and Copies of Citations  
☐ A certified copy of

The filing fee has been calculated as shown below for OTHER THAN A SMALL ENTITY:

<u>FOR</u>	<u>NO. FILED</u>	<u>NO. EXTRA</u>	<u>RATE</u>	<u>FEE</u>
Basic Fee				\$ 690
Total Claims	17	0	18	\$ 0
Indep Claims	2	0	78	\$ 0
Multiple Dependent Claims(s)	0		260	\$ 0
Presented				
			<b>TOTAL</b>	<b>\$ 690</b>

- [X] Please charge Deposit Account No. 06-1500 in the amount shown next to the Total.  
 A duplicate copy of this sheet is enclosed.
- [X] The Commissioner is hereby authorized to charge payment of the following fees associated with this communication or credit any overpayment to Deposit Account No. 06-1500. If there are insufficient funds in this account, please charge the fees to Deposit Account No. 06-1510. A duplicate copy of this sheet is enclosed.  
 Any additional filing fees required under 37 CFR 1.16.  
 Any patent application processing fees under 37 CFR 1.17.
- [X] The Commissioner is hereby authorized to charge payment of the following fees during the pendency of this application or credit any overpayment to Deposit Account No. 06-1500. If there are insufficient funds in this account, please charge the fees to Deposit Account No. 06-1510.  
 Any patent application processing fees under 37 CFR 1.17.  
 Any filing fees under 37 CFR 1.16 for presentation of extra claims.

"Express Mail"  
Mailing Label Number **EF 021716065 US**

Date of Deposit 9-13-00

I hereby certify that this paper or fee is being  
deposited with the United States Postal Service  
"Express Mail Post Office to Addressee" service  
under 37 CFR 1.10 on the date indicated above  
and is addressed to the Commissioner of Patent  
and Trademarks, Washington, D.C. 20231

*De Andra Kirkwood*  
 (Printed Name of Person Mailing Paper or Fee)  
*De Andra Kirkwood*

*Frank G. McKenzie*  
 Frank G. McKenzie  
 Attorney or Agent of Record  
 Registration No. 29,242  
 Ford Global Technologies, Inc.  
 One Parklane Blvd.,  
 600 Parklane Towers East  
 Dearborn, MI 48126

METHOD FOR CONDUCTING  
A FINANCIAL ANALYSIS

Technical Field

5 The present invention relates to methods for  
analyzing financial data in a large business  
enterprises.

Background Art

Large business enterprises employ thousands of  
people, many of whom are involved in conducting  
10 financial analysis for the business enterprise. Some of  
these employees may be full-time financial analysts, and  
others may need to conduct financial analysis only  
occasionally. However, it is critical that any  
financial analysis conducted within a business  
15 enterprise is predicated on the same set of data,  
assumptions, and rules. This ensures that financial  
information may be shared between employees, skills are  
transferred, and best practices are employed.

Prior art methods for conducting financial  
20 analysis within large business enterprises have not  
utilized uniform business processes for conducting  
financial analysis. What is most prevalent in large  
business enterprises are multiple and varied methods for  
conducting financial analysis. Typically, the multiple  
25 methods use a plurality of data sources, varied  
assumptions, and differing rules. The result is that  
employees in one area of a business enterprise are not  
able to communicate the financial analysis in a  
compatible and understandable manner with other  
30 financial analysts in other parts of the company.

Therefore, there is a need for a new and improved system and method for conducting financial analysis within a large business enterprise. The new and improved system and method for conducting financial analysis must provide a common process for conducting financial analysis wherein the process is accessible by all the employees within the business enterprise.

#### Disclosure Of Invention

In accordance with an aspect of the present invention a method is provided for conducting a financial analysis. The method includes creating a financial analysis utility having a standardized format, and providing access through a communication network to the financial analysis utility to employees of a business enterprise. Thus, the present invention provides a single source for the financial analysis utility.

In accordance with another aspect of the present invention, the method further includes creating a rules table for use with the financial analysis utility.

In accordance with still another aspect of the present invention, the rules table matches a user input with a predefined rule to obtain a rate.

In accordance with still another aspect of the present invention, the financial analysis utility is in communication with a database having actual and forecasted financial values.

In accordance with still another aspect of the present invention, the financial analysis utility is an exchange rate tool.

In accordance with yet another aspect of the present invention, the financial analysis utility is a volume extension tool.

5 In accordance with yet another aspect of the present invention, the financial analysis utility is a allocation tool.

In accordance with yet another aspect of the present invention, the financial analysis utility is an aggregation/average tool.

10 In accordance with yet another aspect of the present invention, the financial analysis utility is an variance tool.

15 In accordance with yet another aspect of the present invention, a method is provided for conducting a financial analysis. The method includes creating a financial analysis utility having a standardized format, the standardized format includes a rules table for use with the financial analysis utility and providing access through a communication network to the financial  
20 analysis utility to employees of a business enterprise to establish a single source for the financial analysis utility.

25 The above features, benefits and advantages and other features, benefits and advantages of the present invention are readily apparent from the following detailed description of the best mode for carrying out the invention when taken together with the accompanying drawings.

### Brief Description Of Drawings

Figure 1 is a block diagram of a system and method for calculating vehicle projections, in accordance with the present invention;

5           Figure 2 is a block diagram illustrating the interaction of a projection engine with a toolbox, in accordance with the present invention;

          Figure 3 is a flowchart illustrating a process for using a volume extension tool, in accordance with  
10           the present invention;

          Figure 4 is a flowchart illustrating a process for using an aggregation/average tool, in accordance with the present invention;

          Figure 5 is a flowchart illustrating a process  
15           for using an allocation tool, in accordance with the present invention;

          Figure 6 is a flowchart illustrating a process for using a variance tool, in accordance with the present invention; and

20           Figure 7 is a flowchart illustrating a process for using an exchange rate tool, in accordance with the present invention.

### Best Mode For Carrying Out The Invention

          Reference is now made to Figure 1 which is a  
25           diagrammatic representation of a financial analysis utility 10 for calculating vehicle financial projections. Utility 10 receives operating costs 12 and balance sheet information 14 as system inputs to create vehicle specific financials 16. Vehicle specific  
30           financials are received by common tools 17, projection

and decision models 18 which generate vehicle financial  
projections 20. The vehicle financial projections 20  
and the vehicle specific financials 16 are transformed  
into multiple views 22. The vehicle financial  
5 projections 20 and the vehicle specific financials 16  
are presented in different views for use in decision  
processes 26.

The balance sheet information 14, typically,  
contains net operating assets and other asset  
10 information. Additionally, balance sheet 14 has cash  
contribution and full cash flow information as well.  
Operating costs 12 (period expense) includes labor and  
overhead, engineering, administrative and selling costs.  
Preferably, vehicle actuals and vehicle financial  
15 projections include net revenue, material cost, outbound  
freight, warranty, etc. Generally, projections include  
period expense projections, balance sheet projections,  
and input from vehicle projections. Common tools 17  
include allocation of actual and forecast period  
20 expense, exchange rate conversion, variance analysis,  
average vehicle calculations, and volume extension.

Referring now to Figure 2, a block diagram  
illustrating the interaction of a projection engine 30  
with a toolbox 32 is illustrated, in accordance with the  
25 present invention. Preferably, a user 33 actuates  
projection engine 30 to work with actuals, forecast  
assumptions, and physical assumptions. Projection  
engine 30 calls toolbox 32 to provide user 33 with the  
vehicle projections. Toolbox 32 includes multiple  
30 common tools 17 for calculating vehicle projections.  
Preferably, toolbox 32 includes a volume extension  
tool 34, aggregation/average tool 36, an allocation  
tool 38, an exchange rate tool 40 and a variance tool 42

however, other tools may be added. Toolbox 32 has a standardized format which includes a set of rules 44 and the set of common tools 17.

5 The set of rules 44 dictate how each tool is used with the inputs to the projection engine 30. Preferably, the set of rules exists in a look-up table configuration wherein, inputs received from the projection engine are matched with an appropriate predefined rule or "rate". The "rate" is then used with  
10 the inputs to perform the desired calculations.

Further, a plurality of databases are connected to the toolbox 32 for providing data to each of the common tools 17 to carry out the respective calculations requested by the projection engine 30. For  
15 example, the aggregation/average tool 36 is connected to the vehicle design database (VDD) 46, and the exchange rate tool 40 receives exchange rate information from the accounting system database (ASD) 48 and the plant production actuals database (PPAD) 50 to accomplish the  
20 desired exchange rate calculations. Other databases are accessible by the toolbox 32 such as a volumes database (VD) 52 which provides volume information to the toolbox and a product definition database (PDD) 53 which provides product definition information to the toolbox.  
25 The results generated by the toolbox 32 may be deposited in one or two database storage facilities such as the projection engine forecast database (PEFD) 54 and data warehouse database (DWD) 56.

Referring now to Figure 3, a process for  
30 determining a volume extension using projection engine 30 and toolbox 32 is illustrated, in accordance with the present invention. The process starts with the projection engine 30 requesting a volume extension from

toolbox 32, as represented by block 60. The volume extension tool 34 receives the per unit line item financials along with the requested volume type from the projection engine, as represented by block 62. At  
5 block 64, the volume extension tool obtains the appropriate set of volumes from the VD database 52. The volume extension tool then extends the line item per unit by the required volume set, as represented by block 66. At block 68, the volume extension tool  
10 returns the extended unit mils to the projection engine 30. Finally, projection engine 30 stores the result in databases 54 and 56 and may also display the results to user 33, as represented by block 70.

Referring now to Figure 4, a process for  
15 determining an aggregate or average is illustrated, in accordance to the present invention. The process starts at block 80 wherein the projection engine 30 initiates a request for an aggregated or average view. The aggregated or average tool 36 receives the line item  
20 financials from the projection engine, as represented by block 82. At block 84, the aggregate/average tool 36 uses a flexible organizational structure to determine the summation. As indicated by block 85, if an average vehicle view is sought, then at block 86 the average  
25 tool queries the volumes from the VD database and divides aggregated financials to get the per unit amount. The average tool returns the average financials to the projection engine, at block 87. However, if an aggregation view is sought, the aggregation tool returns  
30 aggregated financials, at block 88. Finally, at block 90, the projection engine stores the results in database 54 and 56 and may present the results to the user 33.



Referring now to Figure 5, a process for allocating an amount is illustrated, in accordance with the present invention. The process is initiated at block 92 where period costs and revenue amounts are sent from source systems to the projection engine 30. At block 94, the projection engine stores naturally occurring amounts and calls the allocation tool 38. The allocation tool looks up the allocation rules and basis amount for configured vehicle, as represented at block 96. At block 98, the allocation of period cost to the configured vehicle by market and source is executed. At block 100, allocation tool 38 returns the allocated amounts by configured vehicle view with input source to the projection engine 30. Finally, at block 102, projection engine stores the allocated line items for future reports and requests.

Referring now to Figure 6, a variance tool process is illustrated, in accordance with the present invention. The process is initiated at block 110 where the variance tool 42 receives the following input parameters from projection engine 30: view type, time periods, line items, and issue number. At block 112, the variance tool retrieves causal factor rules from the projection engine data model. The variance tool 42 obtains volumes and product definition differences from the VD and the PDD databases 52 and 53. At block 116, data is retrieved from the projection engine data store database 54. The variance tool, at block 118 calls the volume extension tool aggregation/averaging tool, and exchange rate tool to perform required calculations. At block 120, VIN\product-specific variance, period variance, and total variance for requested line item is calculated. VIN\product-specific variance and period

variance by causal factors is explained, at block 122.

At block 124, vehicle specific causal factors are calculated in the following order: volume, mix, net revenue change, cost change, and exchange. At

5 block 126, period item causal factors are calculated in the following order: one-time, net revenue change, cost change, and exchange. Finally, at block 128, the output is returned to the projection engine for presentation and storage.

10 Referring now to Figure 7, a process for converting an amount from one currency to another currency is illustrated, in accordance with the present invention. The process is initiated at block 150 where the projection engine 30 sends current currency  
15 information including currency type, amount and desired target currency type to the exchange tool 40. At block 152, the exchange tool 40 locates the appropriate currency exchange rate in the ASD and PPAD databases. A new currency is calculated using the appropriate  
20 currency exchange rate, as represented at block 154. At block 156, exchange tool 40 returns the new currency information including currency type and amount to the projection engine 30. Finally, at block 158, projection engine 30 stores the new currency information for future  
25 reports and requests and/or returns result to user 33.

While the best mode for carrying out the invention has been described in detail, those familiar with the art to which this invention relates will recognize various alternative designs and embodiments  
30 for practicing the invention as defined by the following claims.

What Is Claimed Is:

1           1.    A method for conducting a financial  
2   analysis, the method comprising:  
3            creating a financial analysis utility having a  
4   standardized format; and  
5            providing access through a communication  
6   network to the financial analysis utility to employees  
7   of a business enterprise to establish a single source  
8   for the financial analysis utility.

1           2.    The method of claim 1 wherein creating a  
2   financial analysis utility further comprises creating a  
3   rules table for use with the financial analysis utility.

1           3.    The method of claim 2 wherein the rules  
2   table matches a user input with a predefined rule to  
3   obtain a rate.

1           4.    The method of claim 1 wherein the  
2   financial analysis utility is in communication with a  
3   database having actual and forecasted financial values.

1           5.    The method of claim 1 wherein the  
2   financial analysis utility is an exchange rate tool.

1           6.    The method of claim 1 wherein the  
2   financial analysis utility is an volume extension tool.

1           7.    The method of claim 1 wherein the  
2   financial analysis utility is an allocation tool.

1                   8.    The method of claim 1 wherein the  
2   financial analysis utility is an aggregation/average  
3   tool.

1                   9.    The method of claim 1 wherein the  
2   financial analysis utility is an variance tool.

1                   10.   A method for conducting a financial  
2   analysis, the method comprising:  
3                   creating a financial analysis utility having a  
4   standardized format, the standardized format includes a  
5   rules table for use with the financial analysis utility;  
6   and

7                   providing access through a communication  
8   network to the financial analysis utility to employees  
9   of a business enterprise to establish a single source  
10   for the financial analysis utility.

1                   11.   The method of claim 10 wherein the rules  
2   table matches a user input with a predefined rule to  
3   obtain a rate.

1                   12.   The method of claim 10 wherein the  
2   financial analysis utility is in communication with a  
3   database having actual and forecasted financial values.

1                   13.   The method of claim 10 wherein the  
2   financial analysis utility is an exchange rate tool.

1                   14.   The method of claim 10 wherein the  
2   financial analysis utility is an volume extension tool.

1                   15. The method of claim 10 wherein the  
2 financial analysis utility is an allocation tool.

1                   16. The method of claim 10 wherein the  
2 financial analysis utility is an aggregation/average  
3 tool.

1                   17. The method of claim 10 wherein the  
2 financial analysis utility is an variance tool.

### Abstract Of The Disclosure

A method is disclosed for conducting a financial analysis. The method includes creating a financial analysis utility having a standardized format, and providing access through a communication network to the financial analysis utility to employees of a business enterprise. Thus, the present invention provides a single source for the financial analysis utility.

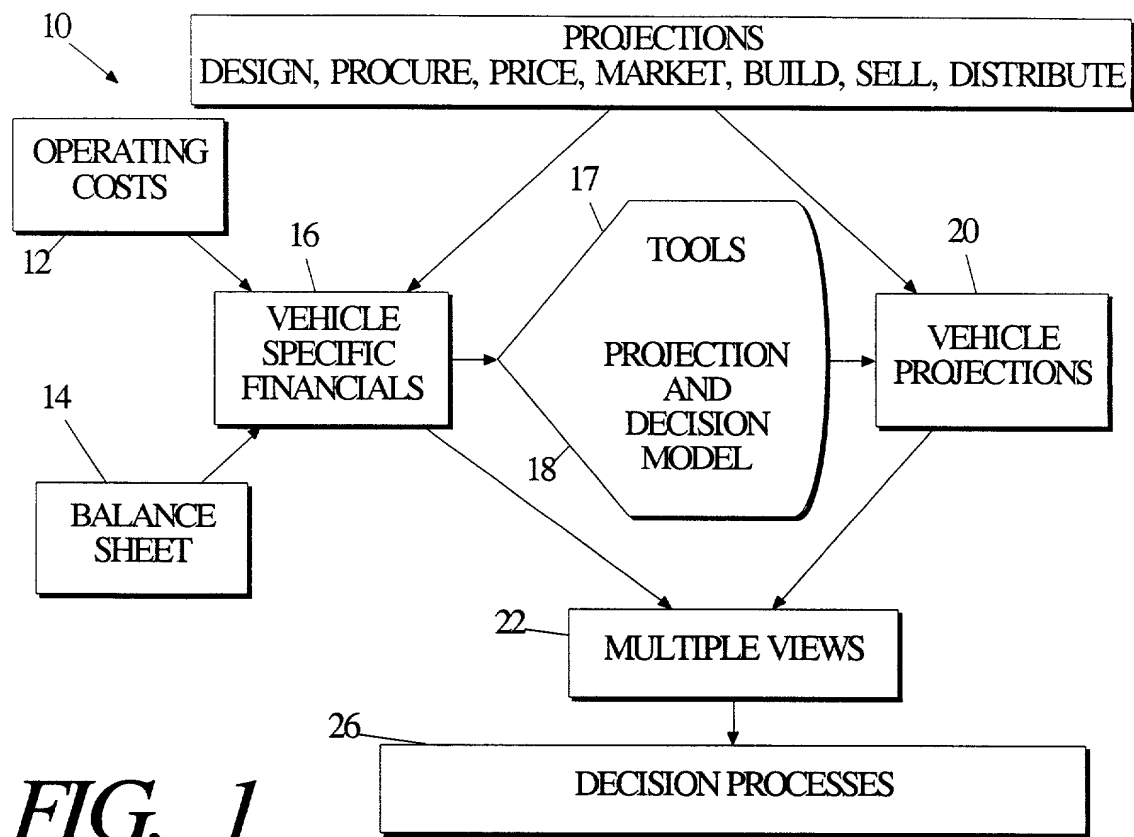
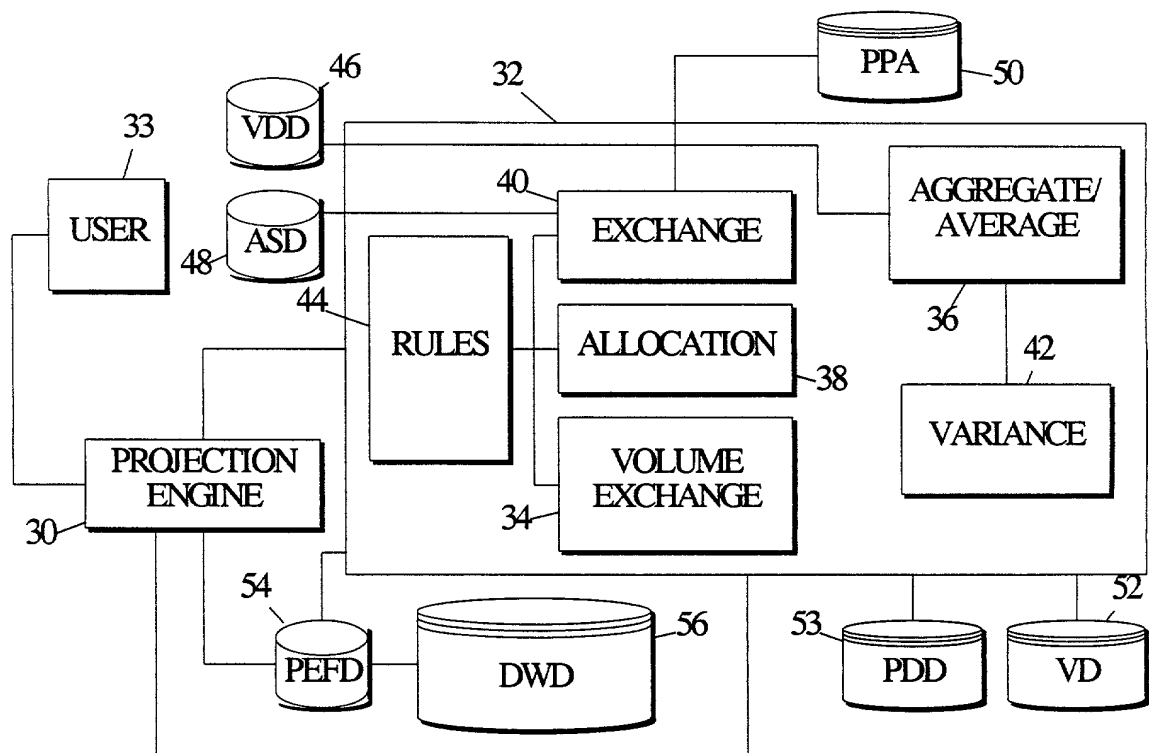


FIG. 2



PROJECTION ENGINE  
REQUESTS A VOLUME  
EXTENSION PROCEDURE

RECEIVE PER UNIT LINE ITEM  
FINANCIALS ALONG WITH  
REQUESTED VOLUME TYPE

QUERY DATABASE  
FOR APPROPRIATE  
SET OF VOLUMES

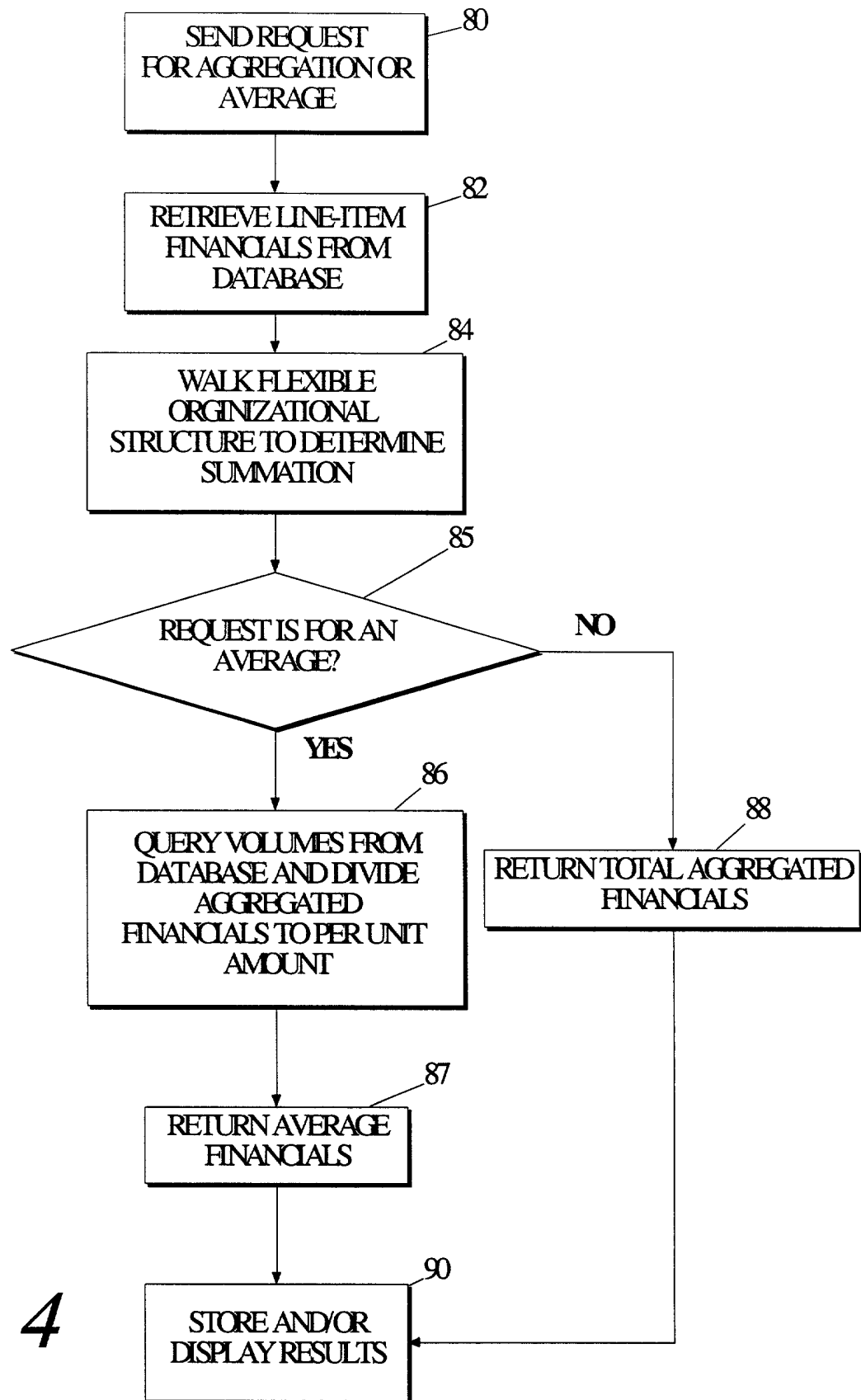
EXTEND LINE ITEM  
PER UNIT BY THE REQUIRED  
VOLUME SET

RETURN THE EXTENDED  
UNIT MILS BACK TO  
THE CALLING  
PROCEDURE

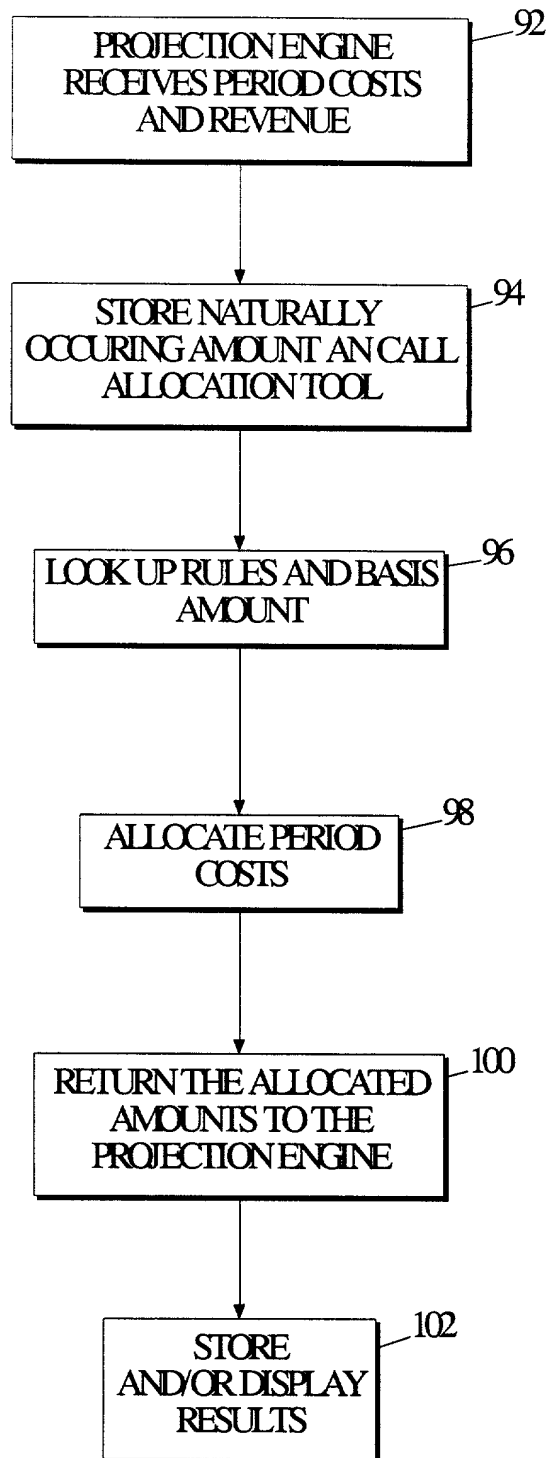
STORE  
AND/OR DISPLAY  
RESULTS

*FIG. 3*

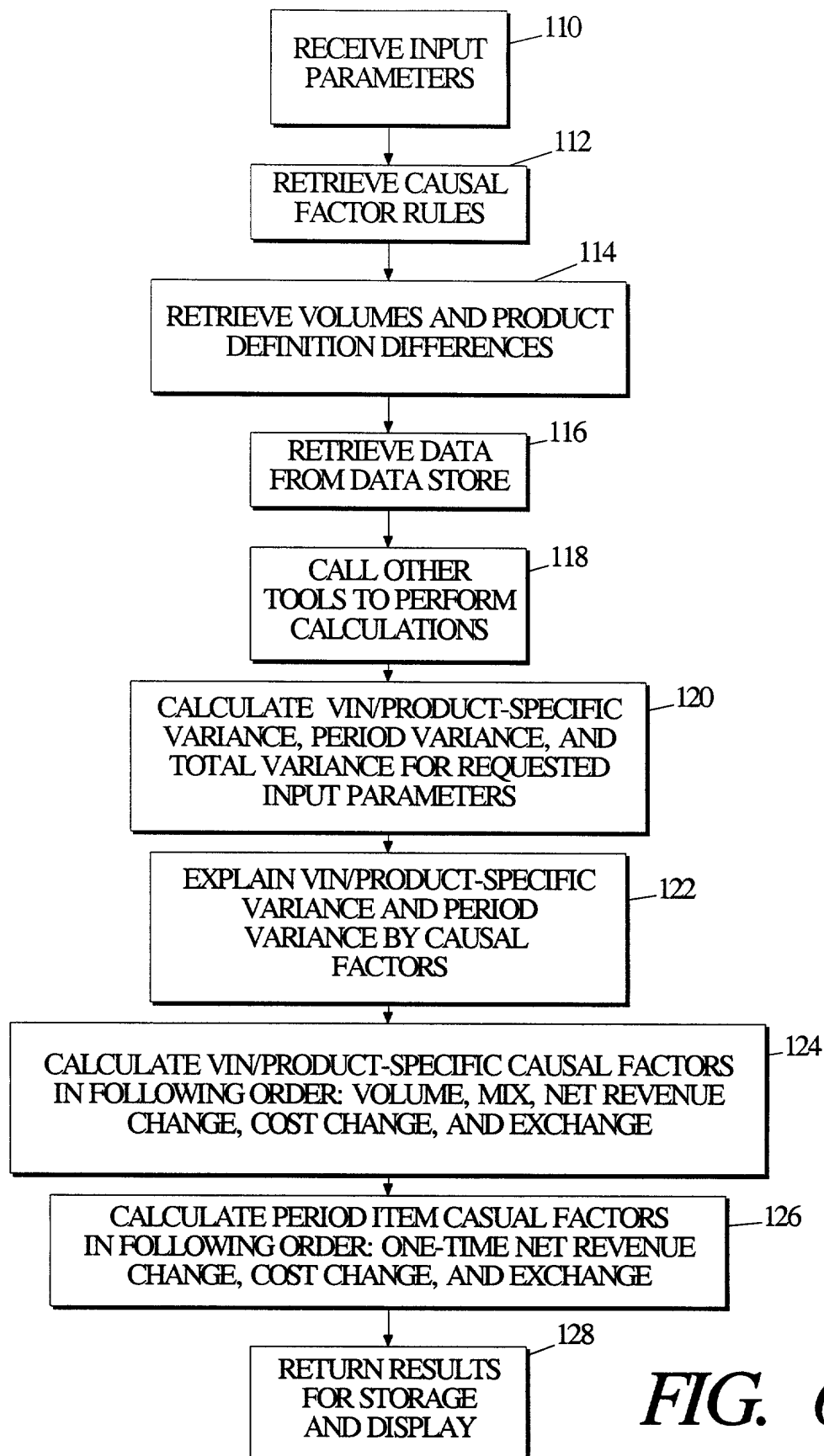




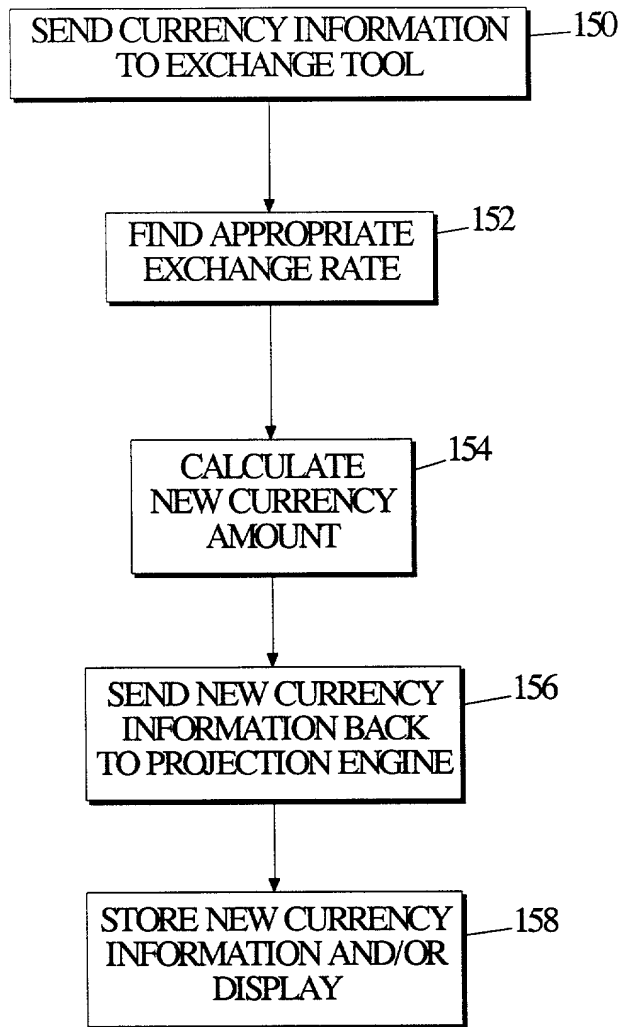
**FIG. 4**



*FIG. 5*



*FIG. 6*



*FIG. 7*

## DECLARATION AND POWER OF ATTORNEY - ORIGINAL APPLICATION

Attorney's Docket No.  
200-0549

As a below named inventor, I hereby declare:  
My residence, post office address and citizenship are as stated below next to my name;

I verily believe I am the original, first and sole inventor or an original, first and joint inventor of the subject matter that is claimed and for which a patent is sought on the invention entitled

**METHOD FOR CONDUCTING A FINANCIAL ANALYSIS**

the specification of which is attached hereto.

I have reviewed and understand the contents of the specification identified above, including the claims.

I acknowledge my duty to disclose information of which I am aware that is material to the examination of this application in accordance with Section 1.56(a), Title 37 of the Code of Federal Regulations; and

as to application for patents or inventor's certificate on the invention filed in any country foreign to the United States of America, prior to this application by me or my legal representatives or assigns,

- ☒ no such applications have been filed, or  
☐ such applications have been filed as follows

COUNTRY	APPLICATION NO.	DATE OF FILING (month, day, year)	DATE OF ISSUE (month, day, year)	PRIORITY CLAIMED UNDER 35 USC 119

I hereby claim the benefit under 35 U.S.C. § 120 of any United States application(s) or § 365(c) of any PCT International application designating the United States, listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States or PCT International application in the manner provided by the first paragraph of 35 U.S.C. § 112, I acknowledge the duty to disclose information which is material to patentability as defined in 37 CFR § 1.56 which became available between the filing date of the prior application and the national or PCT International filing date of this application.

(Application Number) (Filing Date) (Status - patented, pending, abandoned)

(Application Number) (Filing Date) (Status - patented, pending, abandoned)


**POWER OF ATTORNEY:** As a named inventor, I hereby appoint the following attorney(s) and/or agent(s) to prosecute this application and transact all business in the United States Patent and Trademark Office connected therewith and to act on my behalf before the competent International Authorities in connection with any and all international applications filed by me.  
(List name and registration number)

Raymond J. Vivacqua - 45,369  
Frank A. Angileri - 36,733  
Frank G. McKenzie - 29,242  
David B. Kelley - 33,718  
Roger L. May - 26,406

**Address all correspondence and telephone calls to:**

Raymond J. Vivacqua  
 Brooks & Kushman  
 1000 Town Center Twenty-Second Floor  
 Southfield, MI 48075-1351 Phone: 248-358-4400

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

NAME AND POST OFFICE ADDRESS OF INVENTOR:	RESIDENCE	CITIZENSHIP	SIGNATURE	DATE
Colin Jarvis 16 Carson Road Billerica Essex CM11 1SA England GB	England GB	United Kingdom		SEP 4TH 2000
Daphne Wakefield 5511 Deer Run Lane Dexter, MI 48130 US	Dexter, MI 48130 US	U.S.A		
Janis Haag 11555 Knight's Drive Pinckney, MI 48169 US	Pinckney, MI 48169 US	U.S.A		
Nam Thai-Tang 36218 West Thirteen Mile Road Farmington Hills, MI 48331 US	Farmington Hills, MI 48331 US	U.S.A		
Manfred Wajroch Dornheckenweg 16B 53797 Lohmar Germany DE	Germany DE	Germany		
Peter Przybocki 41512 Wild Turkey Lane Canton Township, MI 48188 US	Canton Township, MI 48188 US	U.S.A		
Serguei A. Lougovier 31700 Cowan Rd., Apt. 207 Westland, MI 48185 US	Westland, MI 48185 US	U.S.A		
Michael R. Mei 9326 Florida St. Livonia, MI 48150 US	Livonia, MI 48150 US	U.S.A		

Address all correspondence and telephone calls to:

Raymond J. Vivacqua  
Brooks & Kushman  
1000 Town Center Twenty-Second Floor  
Southfield, MI 48075-1351 Phone: 248-358-4400

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

NAME AND POST OFFICE ADDRESS OF INVENTOR:	RESIDENCE	CITIZENSHIP	SIGNATURE	DATE
Colin Jarvis 16 Carson Road Billerica Essex CM11 1SA England GB	England GB	United Kingdom		
Daphne Wakefield 5511 Deer Run Lane Dexter, MI 48130 US	Dexter, MI 48130 US	U.S.A		
Janis Haag 11555 Knight's Drive Pinckney, MI 48169 US	Pinckney, MI 48169 US	U.S.A		
Nam Thai-Tang 36218 West Thirteen Mile Road Farmington Hills, MI 48331 US	Farmington Hills, MI 48331 US	U.S.A		
Manfred Wajroch Dornheckenweg 16B 53797 Lohmar Germany DE	Germany DE	Germany	M. Wajroch	31/08/2000
Peter Przybocki 41512 Wild Turkey Lane Canton Township, MI 48188 US	Canton Township, MI 48188 US	U.S.A		
Serguei A. Lougovler 31700 Cowan Rd., Apt. 207 Westland, MI 48185 US	Westland, MI 48185 US	U.S.A		
Michael R. Mei 9326 Florida St. Livonia, MI 48150 US	Livonia, MI 48150 US	U.S.A		

Attorney Docket No: 200-0549

Please call 313-822-7725 if this paper becomes separated from the file.

**Address all correspondence and telephone calls to:**

Raymond J. Vivacqua  
 Brooks & Kushman  
 1000 Town Center Twenty-Second Floor  
 Southfield, MI 48075-1351 Phone: 248-358-4400

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

NAME AND POST OFFICE ADDRESS OF INVENTOR:	RESIDENCE	CITIZENSHIP	SIGNATURE	DATE
Colin Jarvis 16 Carson Road Billerica Essex CM11 1SA England GB	England GB	United Kingdom		
Daphne Wakefield 5511 Deer Run Lane Dexter, MI 48130 US	Dexter, MI 48130 US	U.S.A	Daphne Wakefield	9/11/00
Janis Haag 11555 Knight's Drive Pinckney, MI 48169 US	Pinckney, MI 48169 US	U.S.A	Janis Haag	8/31/00
Nam Thai-Tang 36218 West Thirteen Mile Road Farmington Hills, MI 48331 US	Farmington Hills, MI 48331 US	U.S.A	Nam Thai-Tang	8/31/00
Manfred Wajroch Dornheckenweg 16B 53797 Lohmar Germany DE	Germany DE	Germany		
Peter Przybocki 41512 Wild Turkey Lane Canton Township, MI 48188 US	Canton Township, MI 48188 US	U.S.A	Peter Przybocki	8-31-02000
Serguei A. Lougovier 31700 Cowan Rd., Apt. 207 Westland, MI 48185 US	Westland, MI 48185 US	U.S.A Rep. Sp. Belarus	S. Lougovier	8/31/00
Michael R. Mei 9326 Florida St. Livonia, MI 48150 US	Livonia, MI 48150 US	U.S.A	Michael R. Mei	9/5/00